



PUBLIC HEALTH FACT SHEET

Smallpox

The Disease

Smallpox is an acute, contagious and sometimes fatal disease caused by the variola virus, and marked by fever and a distinctive progressive skin rash.

In 1980, public health officials declared that worldwide vaccination programs had been successful in eradicating smallpox. After September 11 and the anthrax attack in October of 2001, the U.S. government has been taking precautions to be ready to deal with a bioterrorist attack using smallpox as a weapon. One confirmed case of smallpox would be considered a public health emergency.

The majority of patients with smallpox recover, but death may occur in up to 30% of cases. Many smallpox survivors have permanent scars over large areas of their body, especially their face. Some are left blind.

Smallpox normally spreads from contact with infected persons. Generally, direct and fairly prolonged face-to-face contact is required to spread smallpox from one person to another. Smallpox also can be spread through direct contact with infected bodily fluids or contaminated objects such as bedding or clothing. Indirect spread is less common. Rarely, smallpox has been spread by virus carried in the air in enclosed settings such as buildings, buses and trains. Smallpox is not known to be transmitted by insects or animals.

The smallpox virus is fragile. In laboratory experiments, 90 percent of aerosolized smallpox virus dies within 24 hours. In the presence of ultraviolet (UV) light, this percentage would be even greater. If an aerosol release of smallpox occurs, 90 percent of the virus will be inactivated or dissipated in about 24 hours.

Symptoms

The symptoms of smallpox begin with high fever, head and body aches and sometimes vomiting. A rash follows that spreads and progresses to raised bumps and pus-filled blisters that crust, scab and fall off after about three weeks, leaving a pitted scar.

After exposure, it takes between 7 and 17 days for symptoms of smallpox to appear (average incubation time is 12 to 14 days). During this time, the infected person feels fine and is not contagious.

Treatment

Smallpox can be prevented through use of the smallpox vaccine. There is no proven treatment for smallpox, but research to evaluate new antiviral drugs is ongoing. Early results from laboratory studies suggest that the drug cidofovir may fight against the smallpox virus; currently, studies with animals are being done to better understand the drug's ability to treat smallpox disease. Patients with smallpox can benefit from supportive therapy (e.g., intravenous fluids, medicine to control fever or pain) and antibiotics for any secondary bacterial infections that may occur.

Reducing the Risk

At the moment, the smallpox vaccine is not available for members of the general public. In the event of a smallpox outbreak, however, there is enough smallpox vaccine to vaccinate everyone who would need it. If given to a person before exposure to smallpox, the vaccine is highly effective in preventing smallpox.

In the event of a smallpox outbreak:

Stay informed. Listen to the news to learn how the outbreak is affecting your community. Public health officials will share important information including areas where smallpox cases have been found, who to call and where to go if you think you have been exposed to smallpox.

Follow the instructions of public health authorities.

Stay away from, and keep your children away from, anyone who might have smallpox. This is especially important if you or your children have not been vaccinated.

If you think you have been exposed to smallpox, stay away from others and call your health department or healthcare provider immediately. They will tell you what you should do.

Smallpox and Bioterrorism

According to the Centers for Disease Control and Prevention (CDC), smallpox could be used as a biological weapon, resulting in sickness and death.

For More Information Contact

Your healthcare provider

Your local department of health

The New Jersey Dept. of Health and Senior Services

Communicable Disease Service at (609) 588-7500

You can also visit the following websites:

The New Jersey Department of Health and Senior Services website at
www.nj.gov/health

The CDC website at <http://www.bt.cdc.gov/agent/smallpox>.